UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,995	06/23/2003	Richard D. Dettinger	ROC920030158US1	9828

46797 7590 11/13/2008

IBM CORPORATION, INTELLECTUAL PROPERTY LAW
DEPT 917, BLDG. 006-1
3605 HIGHWAY 52 NORTH
ROCHESTER, MN 55901-7829

EXAMINER	
JUNG, ALLEN J	
ART UNIT	**PAPER NUMBER**
3628	
MAIL DATE	**DELIVERY MODE**
11/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/601,995	DETTINGER ET AL.	
	Examiner	Art Unit	
	ALLEN J. JUNG	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37 and 46-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37 and 46-74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :07/25/2003, 10/26/2004, 09/30/2005.

DETAILED ACTION

Status of Claims

1. This action is in reply to the response filed on September 29, 2008.

2. Claims 38-45 have been canceled.

3. Claims 1-37 and 46-74 are currently pending and have been examined.

Information Disclosure Statement

4. The Information Disclosure Statements filed 07/25/2003, 10/26/2004, and 09/30/2005 have been considered. Initialed copies of the Form 1449 are enclosed herewith.

Election/Restrictions

5. Applicant's election without traverse of claims 1-37 and 46-74 in the reply filed on July 17, 2008 is acknowledged. With regard to claims 73 and 74, the Examiner thanks the Applicant for pointing the Examiner's typographical error, and acknowledges that claims 73 and 74 will also be examined as part of Invention I.

6. The Examiner further notes that the Applicant had **canceled** claims 38-45 in response to the restriction requirement, and hence only claims 1-37 and 46-74 are currently pending in the prosecution.

Claim Objections

7. Claim 59 is objected to because of the following informalities: claim 59 recites three limitations sequentially labeled (i), (iv) and (v), while it appears to convey (i), (ii), and (iii). Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 50 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 50 only recites the limitation "if so, adding the one or more required result…," without reciting the case where the determination is made that the model entity definition corresponding to the selection *does not* specify one or more required result fields. Thus, the scope of the claimed subject matter is indefinite.

10. Claims 1 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 8 claim a method of providing an *abstract model*, while *the abstract model* is a data structure. When merely "providing" a data structure is claimed, it is vague and indefinite whether the claim actually is directed to a method, or a series of steps being performed.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1-28 and 46-74 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-28 and 46-74 are directed to a series of steps. In order for a series of steps to be considered a proper process under § 101, a claimed process must either: (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials). *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). Thus, to qualify as patent eligible, these processes must positively recite the other statutory class to which it is tied (e.g., by identifying the apparatus that accomplishes the method steps), or positively recite the subject matter that is being transformed (e.g., by identifying the

product or material that is changed to a different state). Claims 1-28 and 46-74 identify neither the apparatus performing the recited steps nor any transformation of underlying materials, and accordingly, are directed to non-statutory subject matter.

13. Claims 1 and 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1 and 8 claim a method of providing an *abstract model*, while the abstract model, as claimed, is clearly a data structure. Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See MPEP 2106.01.

14. Claim 61 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed *abstract model, a run-time component, and a fee calculator* are all claimed to be part of the "*logical framework,"* which, as claimed, is a mere combination of a data structure and computer software instructions. The Examiner notes that the claimed "*logical framework"* by itself is not in any of the following statutory categories: a process, machine, manufacture, or composition of matter, or any improvement thereof. The Examiner also notes that given the fact that this claim is directed to a system, software instructions and data structures, as claimed, cannot be seen as a structural component of the system device.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Examiner's Note: The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

17. Claims 1-37, 46-50 and 54-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coutts et al (US 2002/0073066 A1), in view of Rao et al (US 2003/0110087 A1).

Claims 1 and 8:

Coutts, as shown, discloses the following limitations:

- *providing an abstract model for logically defining abstract operations to access the data, the abstract model comprising: a plurality of logical fields;* (See at least ¶0020-¶0022, ¶0029)
- *(the abstract model comprising:) a mapping rule for each of the plurality of logical fields, which map the plurality of logical fields to physical entities of the data;* (See at least ¶0029)
- *(the abstract model comprising:) a fee schedule for each of the plurality of logical fields,* (See at least ¶0029, ¶0038, and ¶0124)

With regard to the first limitation listed above, Coutts discloses, in at least the paragraphs cited, that "a third party is charged a fee for accessing data accounts."

With regard to the second limitation, Coutts discloses, in at least ¶0029, that "each data account includes data associated with an individual and access rights selected by an individual."

With regard to the third limitation, Coutts discloses that “a third party is charged a fee for accessing data accounts.” Coutts also discloses that such access could incur a payment of “a fee per query.”

Coutts does not explicitly disclose the following limitations:

- *wherein each fee schedule for a given logical field defines a fee to be charged when the given logical field is involved in an abstract operation to access a physical entity corresponding to the given logical field.* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up in such a way that "*each fee schedule for a given logical field defines a fee to be charged."* However, Rao discloses that “pricing structures can include different prices for access to different types of data,” clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts’ data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 8, this claim encompasses substantially the same scope as claim 1. Accordingly, claim 8 is rejected in substantially the same manner as claim 1, as described above.

Claims 12 and 29:

Coutts, as shown, discloses the following limitations:;

- *receiving instructions to perform an operation for accessing the data;* (See at least ¶0020-¶0022, ¶0029, and ¶0037)
- *performing the operation;* (See at least ¶0029, ¶0038, and ¶0124)

With regard to the first and second limitations listed above, Coutts discloses, in at least the paragraphs cited, that a third party could access data accounts in exchange for payment of certain fees,

Coutts does not explicitly disclose the following limitations. However, Rao, as shown, does:

- *determining field-specific fees for each of a plurality of the physical fields accessed by the operation;* (See at least ¶0028 and ¶0071)
- *calculating a total fee to be charged to a user for the operation* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up as a summed total of *"field-specific fees."* However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 29, this claim encompasses substantially the same scope as claim 12. Accordingly, claim 29 is rejected in substantially the same manner as claim 12, as described above.

Claim 46:

Coutts, as shown, discloses the following limitations:

- *providing an abstract model for defining abstract operation specifications logically describing operations to access the data, the abstract model comprising: (a) a plurality of logical fields;* (See at least ¶0020-¶0022, ¶0029)

- *(the abstract model comprising:) (b) a mapping rule for each of the plurality of logical fields, which map each of the plurality of logical fields to at least one of the physical entities of the data;* (See at least ¶0029)
- *(the abstract model comprising:) (c) a plurality of model entity definitions, each comprising at least one logical field corresponding to a physical field of a physical entity;* (See at least ¶0029)
- *and providing a run-time component to transform, according to the abstract model, abstract operation specifications into physical operation specifications consistent with the physical data, wherein each abstract operation specification includes at least one user-selected model entity definitions of the plurality of model entity definitions.* (See at least ¶0029 and ¶0114-¶0120)

With regard to the first limitation listed above, Coutts discloses, in at least the paragraphs cited, that "a third party is charged a fee for accessing data accounts."

With regard to the second and third limitations, Coutts discloses, in at least ¶0029, that "each data account includes data associated with an individual and access rights selected by an individual." Here, the identifications of the data accounts are functionally equivalent to the "*model entity definitions.*"

With regard to the fourth limitation, Coutts discloses that "each data account includes data associated with an individual and access rights selected by the individual." Here, Coutts teaches that each data account has an associated data, which functionally equates to "physical data." With regard to "*abstract operation specifications*" and "*physical operation specifications,*" Coutts teaches a "data sales interface" which is for "allowing a third party to query preselected data accounts; whereby a third party is charged a fee for accessing data accounts." Here, the third party's query for the data accounts is functionally equivalent to the *abstract operation specifications*, and the subsequent physical access to the corresponding data is functionally equivalent to the *physical operation specifications*.

Coutts does not explicitly disclose the following limitation. However, Rao, as shown, does:

- *(the abstract model comprising:) (d) model entity fee schedules for each of the plurality of model entity definitions, wherein the fee schedules each specify a fee for accessing a physical field of the corresponding model entity definition;* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up in such a way that "*each of the plurality of model entity definitions*" specifies an individual fee. However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claims 59 and 61:

Coutts, as shown, discloses the following limitations:

- *an abstract model for defining abstract queries logically describing operations to query the data, the abstract model comprising: (i) a plurality of logical fields;* (See at least ¶0020-¶0022, ¶0029)
- *(the abstract model comprising:)(iv) a mapping rule for each of the plurality of logical fields, which map the plurality of logical fields to physical entities of the data;* (See at least ¶0029)
- *a run-time component configured with transformation instructions to transform an abstract query, comprising logical fields selected from the plurality of logical fields, into a physical query consistent with the physical data; and a fee calculator configured to calculate a fee for executing physical queries based on the fee schedules.* (See at least ¶0029, ¶0037-¶0038, and ¶0114-¶0120)

With regard to the first limitation listed above, Coutts discloses, in at least the paragraphs cited, that "a third party is charged a fee for accessing data accounts."

With regard to the second limitation, Coutts discloses, in at least ¶0029, that "each data account includes data associated with an individual and access rights selected by an individual."

With regard to the third limitation, Coutts discloses that "A third party may have its own agent (hereinafter referred to as a business agent) so that the third party can instruct the broker agent about the number and type of individuals that the third party would like to query. The business agent may then interact with the broker agent," (See at least ¶0037-¶0038) and the broker agent would then retrieve the physical data and forward the data to the third party (See at least ¶0120).

Coutts further discloses, in at least ¶0038 and ¶0120, that fee is charged in bringing the accessed information to the user. With specific regard to the "*fee calculator,*" Coutts does not explicitly disclose that there is *calculation* of the fee being done before charging the fee. However, it would have been obvious to one of ordinary skill in the art that fees would be *calculated* before being presented to the user as the amount being charged, because accessing of multiple data accounts through multiple queries could be involved in Coutts' operation, in which case the total fee could be a combination of a plurality of smaller fees.

Coutts does not explicitly disclose the following limitation. However, Rao, as shown, does:

- *(the abstract model comprising:)(v) a fee schedule for each of the plurality of logical fields;* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up in such a way that "*each of the plurality of logical fields"* specifies an individual fee that may add up to the total fee. However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is

merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 61, this claim encompasses substantially the same scope as claim 59. Accordingly, claim 61 is rejected in substantially the same manner as claim 59, as described above.

Claims 64 and 70:

Coutts, as shown, discloses the following limitations:

- *receiving, via a user interface, user input comprising instructions for an operation for accessing the data selected fields of the plurality of the physical fields;* (See at least ¶0029 and ¶0117)
- *calculating a fee to be charged to a user for accessing the selected fields;* (See at least ¶0038 and ¶0120)
- *displaying the fee to the user via a user interface*. (See at least ¶0120)

With regard to the first limitation listed above, Coutts discloses, in at least ¶0029 and ¶0117, that a data sales interface is provided, and discusses an example of insurance company querying for various customer data via the data sales interface. In the example provided in at least ¶0117, Coutts discloses that such request and input could be done via web browser's interface.

With regard to the second and third limitations above, Coutts discloses, in at least the paragraphs cited, that that "Business agents may pay a fee per query posed so that if they want to find out further information they must pay a further fee." Coutts also discloses, in at least ¶0120, that the broker would provide the insurance company "with a charge for fulfilling the request." One skilled in the art would recognize that if payment is done on a per-query basis and additional query incurs further charging of fees, there is a "*calculating a fee to be charged"* clearly involved in order to charge the users all "query fees" and "further fees" incurred. With regard to the limitation "*displaying the fee to the user via a user interface,"* Coutts, in at least ¶0120, discloses that such providing of "a charge for fulfilling the request" could be done "via the company's Web browser."

Coutts does not explicitly disclose the following limitation. However, Rao, as shown, does:

- *determining field-specific fees for each of the selected fields;* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up as "*field-specific fees for each of the selected fields.*" However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 70, this claim encompasses substantially the same scope as claim 64. Accordingly, claim 70 is rejected in substantially the same manner as claim 64, as described above.

Claims 2, 16-17, 19, 23, 27, 33-34, 36, 49, 56-57, 67-68, and 72:

Coutts discloses the limitations of claim 1, which claim 2 depends upon. Coutts, as shown, also discloses the following limitation:

- *accessing the data according to an abstract operation comprising at least two of the plurality of logical fields*; (See at least ¶0116-¶0117)

Coutts discloses, in the example disclosed in at least ¶0116-¶0117, that there could be multiple (e.g. five hundred) data accounts that the third party could query.

Coutts does not specifically disclose the following limitations. However, Rao, as shown, does:

- *calculating the fee to be charged based on separate fee schedules corresponding to each of the at least two plurality of logical fields*. (See at least ¶0028 and ¶0071)

While Coutts does not explicitly disclose that fee is generated according to *separate fee schedules corresponding to each of the at least two plurality of logical fields,* Rao, in at least ¶0028 and ¶0071, does. In at least ¶0028, Rao discloses "establishing a plurality of subscriptions to the geophysical database, each of the plurality of subscriptions including a respective fee for which a respective subscriber is provided access to the geophysical data." Rao further discloses, in at least ¶0071, that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claims 16-17, 19, 23, 27, 33-34, 36, 49, 56-57, 67-68, and 72, these claims encompass substantially the same scope as claim 2. Accordingly, claims 4, 16-17, 19, 23, 27, 33-34, 36, 49, 56-57, 67-68, and 72 are rejected in substantially the same manner as claim 2, as described above.

Claims 3, 9, 22, and 24:

Coutts, as shown, discloses the following limitations:

- *providing a run-time component configured with transformation instructions to transform each abstract operation, comprising logical fields selected from the plurality of logical fields, into a physical operation consistent with the physical data; and providing a fee calculator configured to calculate a fee for executing physical operations based on the fee schedules.* (See at least ¶0029, ¶0037-¶0038, and ¶0114-¶0120)

Coutts discloses that "A third party may have its own agent (hereinafter referred to as a business agent) so that the third party can instruct the broker agent about the number and type of individuals that the third party would like to query. The business agent may then interact with the broker agent," (See at least ¶0037-¶0038) and the broker agent would then retrieve the physical data and forward the data to the third party (See at least ¶0120). Coutts further discloses, in at least ¶0038 and ¶0120, that fee is charged in bringing the accessed information to the user. With specific regard to the "*fee calculator,"* Coutts does not explicitly disclose that there is *calculation* of the fee being done before charging the fee. However, it would have been obvious to one of ordinary skill in the art that fees would be *calculated* before being presented to the user as the amount being charged, because accessing of multiple data accounts through multiple queries could be involved in Coutts' operation, in which case the total fee could be a combination of a plurality of smaller fees.

As per claims 9, 22, and 24, these claims encompass substantially the same scope as claim 3. Accordingly, claims 9, 22, and 24 are rejected in substantially the same manner as claim 3, as described above.

Claims 4, 15, 21, 25, 32, 62, 66, 71, and 74:

Coutts, as shown, discloses the following limitations:

- *determining a per request fee for a first one of the at least two logical fields, wherein the per request fee is charged for each abstract operation involving the first one of the at least two logical fields;* (See at least ¶0037-¶0038)
- *and determining a per item fee for a second one of the at least two logical fields, wherein the per item fee is charged for each instance of the second one of the at least two logical fields involved in a given abstract operation.* (See at least ¶0037-¶0038)

With regard to the first limitation listed above, Coutts discloses that "business agents may pay a fee per query posed so that if they want to find out further information they must pay a further fee, rather than being able to acquire their own copy of the data on which they could execute multiple

queries free of charge." Here, Coutts is teaching that for each accessing operation which involves certain data accounts, the business agents may have to pay a fee on a per-request (per-query) basis.

With regard to the second limitation listed above, Coutts teaches the "*per item fee"* through the same disclosure ("business agents may pay a fee per query posed so that if they want to find out further information they must pay a further fee, rather than being able to acquire their own copy of the data on which they could execute multiple queries free of charge.") The Examiner notes that Coutts teaches the "*per item fee"* because through the disclosure (i.e. "if they want to find out further information they must pay a further fee, rather than being able to acquire their own copy"), because Coutts teaches that they would allow only one instance of data access in each query. Hence, in Coutts' case, *per item fee* of a data account is actually equivalent to the *per request fee* of a data account.

Coutts does not teach the following limitation. However, Rao, as shown, does:

- *accessing a corresponding fee schedule for each of the at least two logical fields;* (See at least ¶0028 and ¶0071)

While Coutts does not explicitly disclose that fee is generated according to *corresponding fee schedule for each of the at least two logical fields,* Rao, in at least ¶0028 and ¶0071, does. In at least ¶0028, Rao discloses "establishing a plurality of subscriptions to the geophysical database, each of the plurality of subscriptions including a respective fee for which a respective subscriber is provided access to the geophysical data." Rao further discloses, in at least ¶0071, that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have

performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claims 15, 21, 25, 32, 62, 66, 71, and 74, these claims encompass substantially the same scope as claim 4. Accordingly, claims 15, 21, 25, 32, 62, 66, 71, and 74 are rejected in substantially the same manner as claim 4, as described above.

Claims 5 and 26:

Coutts teaches some limitations of claim 4, which claim 5 depends upon. Coutts does not specifically disclose the following limitations. However, Rao, as shown, does:

- *multiplying the per item fee by a number of instances of the second one of the at least two logical fields to determine a product, and summing the product and the per request fee to determine the fee to be charged.* (See at least ¶0019-¶0020 and ¶0070)

Rao, in at least ¶0019, discloses that "access to geophysical data is typically sold on a `per shoot` basis. That is, an E&P company must buy individual access to every shoot of interest." Rao does not specifically disclose that such "per shoot" basis pricing is done via *multiplying* the per item fee and *summing the product* to the subscription fee, it would have been obvious to one of ordinary skill in the art to do so. One would be motivated to find it obvious, because Rao discloses in at least ¶0070 that "in the prior art a subscriber must typically purchase multiple licenses to access multiple shoots." In the case that a plurality of those shoots are in the same level of tiered access (See at least ¶0019 and ¶0070), purchasing multiple licenses for those accesses would result in a payment of *multiplied* product added to existing subscription fees such as broker fees.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 26, this claim encompasses substantially the same scope as claim 5. Accordingly, claim 26 is rejected in substantially the same manner as claim 5, as described above.

Claims 6-7, 10, 11, 14, 18, 28, 31, 35, 48, 58, and 69:

Coutts, as shown, discloses the following limitations:

- *(claim 6) at least one fee schedule defined by the abstract model specifies a first fee for a first type of operation and a second fee for a second type of operation; and further comprising calculating the fee to be charged based on the type of operation performed* (See at least ¶0028-¶0030)
- *(claim 7) the first type of operation is a query and the second type of operation is one of an insert and an update.* (See at least ¶0028-¶0030)

Coutts discloses, in at least ¶0028, that the system provides multiple services such as data warehousing (updating and storing) service and data sales (data brokerage) service. According to Coutts, both services have associated fees.

As per claims 10, 11, 14, 18, 28, 31, 35, 48, 58, and 69, these claims encompass substantially the same scope as claims 6-7. Accordingly, claims 10, 11, 14, 18, 28, 31, 35, 48, 58, and 69 are rejected in substantially the same manner as claims 6-7, as described above.

Claims 13, 30, 47, and 65:

Coutts, as shown, discloses the following limitations:

- *the physical entities are database tables* (See at least Figs 4A-4C, and ¶0087-¶0088)

As per claims 30, 47, and 65, these claims encompass substantially the same scope as claim 13. Accordingly, claims 30, 47, and 65 are rejected in substantially the same manner as claim 13, as described above.

Claims 20, 37, 54-55, 60, 63, and 73:

Coutts, as shown, discloses the following limitations:

- *each mapping rule comprises an access method for each logical field of an abstract operation specification logically defining the operation accessing the data, the access method describing a physical location of a physical entity* (See at least Figs 4A-4C, and ¶0120)

Coutts discloses, in at least ¶0120, an example of fulfillment of a query request, in which "the broker routine 76 queries the DBMS 22 to obtain the information requested, and forwards the results of the query to the insurance company's Web browser." Here, the broker routine 76 performs a query with the input parameters, and retrieves the rest of the data that are associated with each of the parameters. Although Coutts does not explicitly disclose that in this querying/accessing process there is *an access method describing a physical location of a physical entity*, it would have been obvious to one of ordinary skill in the art that when a query software finds a data account with a matching parameter, the query software would then be directed to the location of the rest of the data account (e.g. the database table's entire row that has the input parameter). One would be motivated to find it obvious, because in retrieving an associated data from a memory, one could efficiently do so by being directed to such data's memory location.

As per claims 37, 54-55, 60, 63, and 73, these claims encompass substantially the same scope as claim 20. Accordingly, claims 37, 54-55, 60, 63, and 73 are rejected in substantially the same manner as claim 20, as described above.

Claim 50:

Coutts, as shown, discloses the following limitations:

- *receiving, via a user interface, the abstract query comprising a plurality of query conditions, result fields and a selection of one of the model entity definitions;* (See at least ¶0117-¶0120)
- *accessing the model entity definition corresponding to the selection;* (See at least ¶0117-¶0120)

- *determining whether the model entity definition corresponding to the selection specifies one or more required result fields;* (See at least ¶0117-¶0120)
- *and if so, adding the one or more required result fields to the query.* (See at least ¶0117-¶0120)

Coutts discloses, in at least ¶0117-¶0120, that a query would take acceptance criteria such as information relating to people having selected parameters. The selected parameter being input (e.g. gender and age) is functionally equivalent to the "*result fields.*" The query also comprises a specification for pool of data accounts to query from (e.g. people living in large cities), which is functionally equivalent to *selections of one of the model entity definitions.* In the example disclosed in ¶0117-¶0120, the required gender and age (e.g. male aged between 23 and 30) is functionally equivalent to "*required result fields.*" Coutts teaches that the query would access the pool of data accounts, and the data accounts that specify the *required result fields* are added to the query's results.

18. Claims 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coutts, in view of Rao, and further in view of Lyons et al (US 4,989,141).

Claims 51-53:

Coutts discloses the limitations of claim 46, which claim 51 depends upon. Coutts does not specifically discloses the following limitations. However, Lyons, as shown, does:

- *transforming, by the run-time component transforms and according to the abstract model, a single abstract operation specification into at least two separate physical operation specifications consistent with the physical data, wherein each physical operation specification modifies a different physical entity of the data and wherein each physical operation specifications is ordered for execution according to a physical entity relationships specification defining hierarchical relationships between the physical entities of the data.* (See at least col3:lines5-10)

Lyons, in at least the lines cited above, discloses that "the system allows for hierarchical mapping… therefore, when data is input into the data base so as to update an entry, all entities which are attached to the updated entity are also updated."

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts/Rao combination's data access service, with the database updating scheme as taught by Lyons. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claims 52-53, these claims encompass substantially the same scope as claim 51. Accordingly, claims 52-53 are rejected in substantially the same manner as claim 51, as described above.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Allen J. Jung** whose telephone number is **571.270.3919.** The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **JOHN W. HAYES** can be reached at **571.272.6708**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair <http://pair-direct.uspto.gov >. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to **571-273-8300**.

Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window**:

Randolph Building
401 Dulany Street
Alexandria, VA 22314.

November 7, 2008

/Allen J Jung/ Examiner, Art Unit 3628

/JOHN W HAYES/
Supervisory Patent Examiner, Art Unit 3628